AGENDA ITEM III

PROPOSED NEW ACADEMIC PROGRAM

UNIVERSITY OF NEW ORLEANS

Bachelor of Science in Environmental Science & Policy
CIP Code 03.0102

STAFF SUMMARY

1. Description

The proposed B.S. in Environmental Science and Policy is a multidisciplinary degree, based in general degree core courses (45 cr) and courses in the biological or geological sciences (15 cr). This foundation underpins required courses in environmental science and policy, environmental law, engineering, management, and technical writing (40 cr), and an additional core of courses in business and economics (15 cr). Electives (15 cr) are to be drawn from a list of recommended courses in science and technology, geography, management and urban studies. The program is designed to prepare students for positions in industry and government in the areas of environmental analysis, policy, and regulatory compliance.

2. Need

A number of other institutions in Louisiana offer programs in Environmental Science, but none of these combines scientific training with the study of management and policy issues. Program duplication is therefore not an issue. University surveys of "persons who oversee environmental policy and compliance for industrial and governmental entities" indicate that multidisciplinary training of the type proposed is definitely needed.

3. Students

On the basis of a number of student inquiries and enrollment figures from the University's General Studies program, the proposal anticipates steadily increasing student interest in the program – from 60 students in year one to 120 by year five. These figures appear reasonable, given that between 45 to 60 students per semester already use the University's General Studies program to craft an emphasis in environmental science and related themes. A comprehensive baccalaureate program with a strong foundation in science and policy coursework is likely to attract more students. The University expects to graduate 10 students in year two, 20 in year three, and 30 per year thereafter.

4. Faculty

Current faculty resources appear to be adequate. Most of the courses in the program are already being offered by existing faculty in participating departments. Recruitment of any new or replacement faculty will not require an unusual outlay of funds.

5. Libraries and Other Special Resources

Library and other special resources appear adequate. University library holdings and connectivity to online resources are current. Students in the program will also have access to local and area collections such as the U.S. Army Corps of Engineers Library, the Audubon Institute Library, the Law Library of Louisiana, the Louisiana Marine Consortium library, and others.

6. Facilities and Equipment

Since most courses are already a regular part of the University's offerings, courses can be readily accommodated by existing classrooms and laboratories. The University projects no need for new facilities or remodeling.

7. Administration

Administration of the program appears appropriate. The program will be supervised by a program coordinator, who will be advised by a program committee composed of one representative from each participating department. The program coordinator will report to the Dean of the College of Sciences.

8. Accreditation

No accreditation is available for this program.

9. Budget

No additional state funds are needed. The program will be funded through reallocations within existing budgets of participating departments and additional student tuition revenues to be generated. The estimated cost for a half-time director, adjunct faculty, staff, expenses, and recruitment is $47,000 in year one, $48,650 in year two, $50,100 in year three, and $51,550 in year four. If projections for student numbers are realized, tuition revenue alone will produce an additional $141,720 in year one, growing to $288,344 in year five.

CONSULTANT' S EVALUATION AND INSTITUTIONAL RESPONSE

To review the proposed program, Academic Affairs engaged the services of James R. Pratt, Vice Provost for Academic Personnel and Budget and Professor of Environmental Sciences at Portland State University. While Dr. Pratt was very supportive of the university's proposal, he also expressed

some concerns. The University responded as follows to major problematic areas:

Consultant: A basic course in physics will likely be needed by all students. Additionally, students need to be encouraged to study differential and integral calculus in preparation for understanding and using dynamic mathematical models.

UNO response: A physics course will be added in lieu of one of the science electives. [...] All students will be advised to take calculus, but students interested in environmental modeling will be required to take differential and integral calculus.

Consultant: The program needs to assure that its core ENSP courses include the principles of integrated environmental science... A technically oriented course for majors is important to assure that the principles of earth system science and ecosystem ecology are tied together.

UNO response: The course description [for ENSP 1100, a core course] does not clearly define the intent of this course and will be rewritten to do so. Also, ENSP 4100 (Approaches to Environmental Problems) is the capstone course for the program and uses technical, integrated approaches to solving environmental problems.

Consultant: Some consideration needs to be given to the role of information and data management. Some exposure to statistical principles and analysis is needed and is missing from the curriculum.

UNO response: Students will be encouraged to enroll in undergraduate research and to obtain a certificate in a GIS (General Information Systems) program on campus. GEOG 2801 (Quantitative Methods in Geography) or an equivalent course in biology or geology will be used to introduce students to the development and use of databases and statistical analysis of data.

Dr. Pratt made additional suggestions that UNO has yet to address fully. These include: student advising requirements in a multidisciplinary program; additional staff support (particularly if enrollment figures meet university projections); a guarantee of continuing University support for participating departments; a need for some specialized journals and books; and a somewhat "deficient" discussion of how information technologies can be used to support the program's students.

STAFF ANALYSIS

UNO's response to the consultant's report addressed only primary areas of concern. While these responses were adequate, some weaknesses remain that have yet to be fully addressed. While these unresolved problems are not significant enough to delay program implementation, the staff believes that

the University should be required to respond more fully in a subsequent progress report. This report should be due before program implementation in Spring, 2000.
Arriving at the above judgment, it is significant to note the following excerpt from Dr. Pratt's report:

> "The program developers should be applauded for including significant contributions from the business, engineering, and urban studies programs. These are notable strengths that serve to build significant integrations across often isolated programs and departments... Such integration is in concert with the direction undergraduate environmental programs are moving nationally, and the developers have presciently predicted the need for broad-based integration."

STAFF RECOMMENDATION

The staff recommends that the Academic and Student Affairs Committee grant conditional approval for the Bachelor of Science program in Environmental Science and Policy (CIP Code 30102) at the University of New Orleans, with the stipulation that the University shall submit a progress report to the Commissioner of Higher Education that addresses the following concerns:

1. ***need for adequate student advising;***
2. ***need for staff in excess of a single half-time position;***
3. ***some guarantee of university support for participating departments;***
4. ***need for additional, specialized book and journal acquisitions; and***
5. ***the use of information technologies to support student learning.***

This report shall be due on December 1, 2000.

In accordance with Board of Regents Academic Affairs Policy 2.13, no professional accreditation is mandated for this program.